Service and Parts Manual

SPM 641

CTT 7

SERIAL NUMBER _____

ALWAYS GIVE TRUCK SERIAL NUMBER WHEN ORDERING PARTS

CLARK Material Handling Company

DESCRIPTION

1. General

This section contains the general description of the Model TT Tow Tractor outlining the design technical and functional characteristics and the rational used in the selection of major and ancillary components. Figure 1 illustrates the overall unit configuration and component locations.

2. Desian Requirements

A. Philosophy

The design of this configuration facilitates and reduces unnecessary maintenance and insures a high degree of. safe and reliable performance;

B. Functional

(1) Major assemblies and components are located to facilitate disconnection and quick removal with a minimum of disturbance to.other components.

(2) All service and maintenance points, such as electrical panels, hydraulic equipment, structural components, and lubrication fittings are easilyaccessible.

(3) Components are installed in accordance with OEM recommendations. Those alterations which could. affect the performance of the tractor have been approved in writing by BLUE GIANT.'

(4) The tractor is capable of starting and operating in temperature ranges of -35°F to 120°F. Rugged design and care in selection of components to permit operation in climatic conditions ranging from arctic to tropic have been incorporated.

(5) All non-waterproof compartments and areas that might collect moisture are provided with functional drain systems.

(6) The tractor and its accessories are to be designed to perform reliably for a minimum of 200 operating hours without failures between routine preventive maintenance checks.

A manually operated two pole mechanical plug and receptacle assembly with mounted handle on the female plug for ease of making and breaking the main power connection to the battery. The top half of the disconnect is either plugged into the lower half to furnish to the tractor electrical control and propulsion systems or into the external battery charger as needed.

The battery disconnect is located behind and to the right of the seat within easy reach of the operator.

3. Operating Procedures

WARNING: 'DO **NOT ATTEMPT TO DRIVE** THIS UNIT UNTILCOMFORTABLE **WITH** THE, LOCATION AND OPERATION OF **THE DRIVING** CONTROLS. ONLY TRAINED, AUTHORIZED **DRIVERS SHOULD** OPERATETHE TRACTOR.

A. Preoperational Checks

Perform the following checks of the tractor prior to attempting to normally operate **it each** day.or **shift.**

(1) Check the-charged condition of the battery by observing the Battery Discharge Indicator (BDI) on the **operator's** control panel. **The BDI** should optimally indicate 100% battery capacity available. The operator must be aware that a lesser battery charge indication on the BDI will degrade the overall performance of the unit nearly proportionally.

(2) Check the condition of the tires and wheel **assemblies** forforeign material fouled around the hubs and or underneath the drive axle and steering gear.

(3) Check that all controls and indicators are functioning properly.

(4) Check that the tractor has no loose or damaged components or mounting hardware.

(5) Report all defects found before placing the unit to service.

SPECIFICATIONS AND CAPABILITIES

1.	Body:	3-Wheel, 7 gauge plate steel superstructure formed on a # frame, steel front and rear bumpers and wheel guards.	
2.	Braking:	Hydraulic rear wheel service brakes and mechanical parking brake acting on the rear wheels.	
3.	Dimensions (See Fig.1):	Overall height:	56.5 in.to top of steering wheel.
		Overall length:	80 in
		Overall width:	40.5 in.
4.	Turnina Radius:	Curb to curb	127in.
5..	Weight:	TT 1 001	2350 lbs.
		TT 1 002	2375 lbs.
6.	Wheel Base:		49in.
7.	Wheel Tread:		6 or 7 in.
8.	Electrical Svstem:	36 or 48 volt system with industrial battery.	
9.	Frame:	7 gauge steel panels over heavy steel angle, channeland tubular cross members.	
10.	Seat:	Single passenger type, vinyl clad with full width backrest.	
11.	Motor:	•36 or 48 volt DC series wound traction type. •Up to # hp at 1500 rpm., 12.5 hp continuous.	

•Maximum speed 3000 rpm.
•Fan cooled
*Winding resistance @ 25°C (77°F):
Armature (Between I-10 bar span - .0051 ± .0005 ohms.
Armature (Adjacent bar to bar) - .0001 ± .00001 ohms.
Series field (S1 to S2) - .0150 ± .0015 ohms.

12. Drive — Direct drive motor to differential.

13. Differential: — Worm-driven, fully recessed gearing, cast iron housing, 20.4:1 ratio.

14. Steering: — Chain and ring gear type.

15. Suspension: — Solid front and rear.

16. Tires: — Solid 6 or 7 inch width;

17. Drawbar pull (Level Ground):

Maximum	Continuous
1600lbs.	480 lbs.

18. Payload: — 20,000 lbs plus operator.

19. Tested Performance Characteristics

° Full speed w/l 0,000 lbs tow for 145 ft. - 21.4 seconds (4.7 mph).

° Full speed unladen for 145 ft. - 10.83 seconds (9.1 mph).

° Full speed w/10,000 lbs tow for measured 1/2 mile - 3 minutes 22 seconds.

° Full speed w/10,000 lbs tow on 3% inclined grade for 100 ft - 14.75 seconds.

SHIPPING

1. General

Shipment of the Model TT Tow Tractor is normally done in it's fully assembled configuration with the exception of the disconnected battery. Since the tractor can be subjected to unacceptable and structurally damaging stresses and loading factors, wood dunnage is used to support the frame while providing clearance between the shipping vehicle and the drive wheel and steering gear.

2. Shioment Practices

Shipment of major components, which have been removed from the tractor from one location to another should be done according to the following procedures as a minimum:

A. Transport Vehicles

The tractor should be transported on a trailer or other vehicle of suitable size to accommodate the overall dimensions and weight.

The tractor must be adequately blocked, chocked and tied down at manufacturer's specified tie down points to preclude damage by tie down cables, chains and other dunnage.

B. Electrical Circuit Isolation

All battery supplied electrical circuits must be isolated from the battery by disconnecting the battery.

C. Access Plates

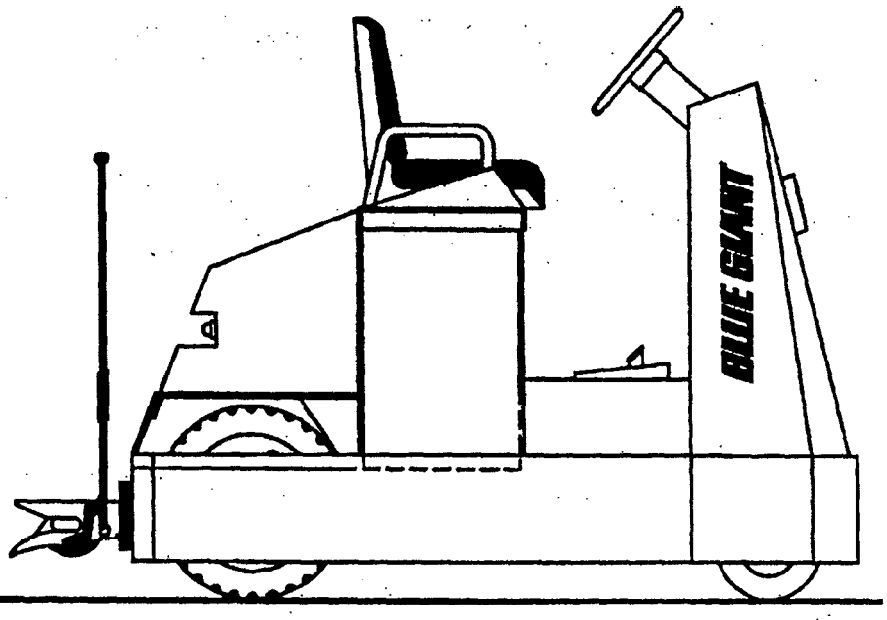
Access plates must be in place with securing hardware tight. Electrical panels must be sealed at the seams with tape to prevent entry of water during inclement weather shipping conditions.

D. Special Precautions

Special weatherproofing precautions such as crating and vinyl coverings must be taken in the event that part or all of the unit is to be transported by ship which will subject the shipment to sea water corrosive factors.

OPERATION AND MAINTENANCE MANUAL
WITH
ILLUSTRATED PARTS LIST

Blue Giant Equipment Corporation
Model TT Tow Tractor



April 1992

materials handling equipment
BLUE GIANT®

MODEL TT TOW TRACTOR

OPERATION AND MAINTENANCE MANUAL

TABLE OF CONTENTS

MODEL TT TOW TRACTOR

OPERATION AND MAINTENANCE MANUAL

TABLE OF CONTENTS (CONT'D)

INTRODUCTION

This manual contains descriptive information, operating instructions, specifications, maintenance and overhaul instructions, parts lists and OEM component data for the BLUE GIANT Model TT Tow Tractor.

These electrically powered tow tractors are especially designed for heavy duty towing of cargo trailers weighted up to 20,000 pounds.

The Model TT tow tractors are manufactured by:

BLUE GIANT EQUIPMENT CORPORATION
One Industrial Drive
Pell City, AL 35125

(205) 884-1500 (S a l e s)
(205) 338-7986 (Parts and Service)